

CLAIMS

1. A method for supplying power in a wireless surveillance system that comprises a base station and at least one surveillance device, such as a camera,

the base station comprising a radio frequency transceiver for establishing a telecommunications connection to said at least one surveillance device, a power transmitter that comprises a first light source and means for directing the light emitted from the first light source in a desired direction, and a second light source; and

the surveillance device, such as camera, comprising means for generating surveillance data and a radio frequency transceiver for transmitting the surveillance data wirelessly to said base station, a power receiver that comprises a first photo-detector for receiving emitted light and transforming it into electric current, and a second photo detector; the method comprising

transmitting by means of the second light source in the power transmitter a substantially parallel light arranged around the light emitted by said first light source, the power of the light being substantially lower than the power of the light emitted by said first light source,

detecting by means of the second photo-detector of the power receiver the light emitted by said second light source,

transmitting a control signal from the surveillance device to the base station by means of said radio frequency transceiver in response to receiving the light emitted by said second light source, and

switching on the first light source of the power transmitter in response to receiving from the power receiver the control signal on the reception of the light emitted from the second light source.

2. A method as claimed in claim 1, comprising

transmitting said control signal from the power receiver to the power transmitter at regular intervals on the reception of the light emitted by the second light source at regular intervals,

ending the transmission of the control signal in response to detecting a disturbance in the light emitted by the second light source, and

switching off the first light source of the power transmitter.

3. A method as claimed in claim 1, comprising

transmitting the light emitted by the second light source in pulses,

ending the transmission of the control signal in response to the time between two consecutive pulses received by the power receiver being at least twice the inverse value of the transmission frequency of the pulses.

4. A method as claimed in claim 1, comprising

registering the power receiver to the power transmitter before power transmission by transmitting from the power receiver a registering message by means of the control signal,

5. A method as claimed in claim 4, comprising

switching on in the power receiver a LED operating in the infrared range after said registering message is transmitted.

6. A method as claimed in claim 5, comprising

determining the location of said power receiver by using a PSD diode in the power transmitter, the diode being arranged to detect in the power receiver the LED operating in the infrared range in response to the reception of said registering message.

7. A method as claimed in claim 1, comprising

deflecting the light emitted by the second light source of the power transmitter according to a predefined route in the space surrounding the power transmitter to search for the power receivers.

8. A method as claimed in claim 1, comprising

transmitting the light of the second light source at a level that is substantially so low as not to damage the eye.

9. A wireless surveillance system that that comprises a base station and at least one surveillance device, such as a camera,

the base station comprising a radio frequency transceiver for establishing a telecommunications connection to said at least one surveillance device, a power transmitter that comprises a first light source and means for directing the light emitted by the first light source in a desired direction, a second light source, the light emitted by which is substantially lower in power than the light emitted by the first light source, and which emitted light is arranged to be transmitted substantially parallel around the light emitted by the first light source,

the surveillance device, such as camera, comprising means for generating surveillance data and a radio frequency transceiver for transmitting the surveillance data wirelessly to said base station, a power receiver that comprises a first photo-detector for receiving emitted light and transforming it

into electric current, and a second photo-detector for detecting the light emitted by the second light source, and, in response to the detection, the surveillance device is arranged to transmit a control signal to the base station by means of the radio frequency transceiver,

whereby the base station is arranged to first switch on the second light source of the power transmitter and, in response to receiving said control signal on the reception of the light emitted by the second light source, the base station is arranged to switch on the first light source of the power transmitter.

10. A surveillance system as claimed in claim 9, wherein

the power receiver is arranged to transmit said control signal to the power transmitter on the reception of the light emitted by the second light source at regular intervals, and, in response to detecting a disturbance in the light emitted by the second light source, to end the transmission of the control signal,

whereby the power transmitter is arranged to switch off the first light source.

11. A surveillance system as claimed in claim 9, wherein

the power receiver is arranged to register to the power transmitter before power transmission by transmitting by means of said control signal a registering message.

12. A surveillance system as claimed in claim 11, wherein

the power receiver comprises a LED operating in the infrared range that is arranged to be switched on after the registering message is transmitted.

13. A surveillance system as claimed in claim 12, wherein

the power transmitter comprises a PSD diode that is arranged to detect in the power receiver the LED operating in the infrared range in response to receiving said registering message in the power transmitter.

14. A surveillance system as claimed in claim 9, wherein

the power transmitter comprises deflecting means for deflecting the light emitted by the second light source according to a predefined route in the space surrounding the power transmitter to search for the power receivers.

15. A wireless base station in a surveillance system, which comprises a radio frequency transceiver for establishing a telecommunications connection to at least one surveillance device, wherein

the base station comprises a power transmitter that comprises a first light source and means for directing the light emitted by the first light source in

a desired direction, a second light source, the light emitted by which is substantially lower in power than the light emitted by the first light source, and which emitted light is arranged to be transmitted substantially parallel around the light emitted by the first light source,

and the base station is arranged first to switch on the second light source of the power transmitter and, in response to receiving from the surveillance device through the radio frequency transceiver a control signal on the reception of the light emitted by the second light source, the base station is arranged to switch on the first light source of the power transmitter.

16. A wireless surveillance device, such as camera, in a surveillance system, which comprises means for generating surveillance data and a radio frequency transceiver for transmitting the surveillance data wirelessly to a base station of the surveillance system, wherein

the surveillance device comprises a power receiver that comprises a first photo-detector for receiving the light emitted by a first light source of a power transmitter in the base station and transforming it into electric current, and a second photo detector for detecting the light emitted by a second light source of the power transmitter in the base station,

whereby, in response to the detection, the surveillance device is arranged to transmit a control signal to the base station by means of the radio frequency transceiver.